

8R-

733-740

Smooth yellowish green
shrub

8R = P

Possibly "N. pallidiventer" of Tyler. Gregarious
on willow (S.) at Bluff Point
Plattsburgh Aug. 24 1897. A slight odor
just like water-melon or, in open air,
scarcely any smell.

Hds 1.6-1.8 round, shining black. Body
light green not shiny; genit 2 are yel-
lowish, no marks. Segs 4-annulate with
distinct black tubercle but
and on 5+ as in fig.

A  A row of annulet black spot
8d and before 8v marks.
fist pale, thoracic with large
black patch at base and Koch
claw. Quadrata black anal plate.

spots faint just anal group, black
in ventral glands. A faint annulet
spotted blackish d. line. feet 6-11, 13.

Sept 1 down without shedding

Chart

1882 Nov. 4

Pontania n.sp. near fugitiva

8 S

Galls on Salix sericea Plattsburgh N.Y.
Aug 27 1897. Solitary, smooth, exceedingly
edge of leaf, from midrib to beyond
margin and at varying distance
from base; not evenly divided by
leaf, $\frac{1}{3}$ above, $\frac{2}{3}$ below; elongated
pyriform or rounded, a few
caterpillar dots. Greenish, strongly
red shaded especially above. L 8-9;
w 6 ± height 5 mm thick. Fleshy, the
meat white with pink tinge.

Larva 6 all white, eye and mouth black.
Hd 1.0 whitish, a dark shade above, eye
black, mouth brown. Body all white, waxen,
now shiny, seg. oblique & rounded and
a little blackish shaded in the folds. Tho.
feet with large, clothes, abd 6-11, also
distinct, slender. Body uniform; 2-3 folds
somewhat prominent, 13 tapering. L 6 $\frac{1}{2}$ in
out of gall Sept. 7. Out March 25 1898

Pontania n.sp. near fugitiva

8 T

Galls with 8 S but gregarious, hairy
and appressed. Near base of leaf, 3, 2 or
rarely one, exceeding margin
often $\frac{1}{2}$ diameter. Not
evenly divided by leaf, $\frac{1}{3}$ or a
little more above, about $\frac{2}{3}$ below. Pale
greenish, often heavily marked & mottled
with red above, pale below, rarely uniform
pale. Strongly sticky hairy like the
leave below. No hairy or even smooth
above. 8.5 x 8.5 x .7 mm or down to
5 mm diameter. Fleshy, meat strongly
pink streaked.

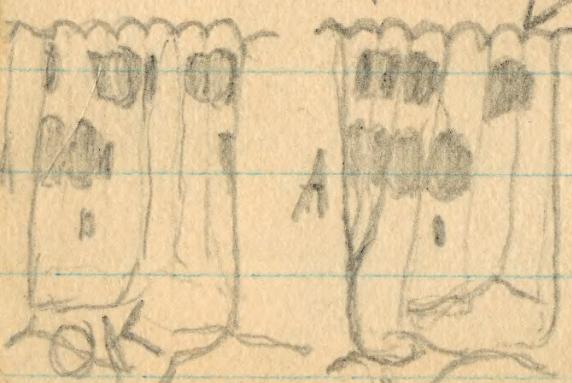
Larva 9 all white, eye & mouth black, body
annulate with large circolous tubercles
joint 13 tapering.

Out March 31 1898

shed skins of last stage are pink, hard, unspotted,
ash. hd. 2.40 mm. - Det June 4 1898
♀ 2E Harpefibrum vararium Nutt

8U = 2E

From Dr. E. G. Love, taken at Yorkton
Aug. 27 1897. Received me Aug. 31 in
burning jacket and anxious to
have in wood. Test "like button ball fish."
(burning jacket) Hds. black 2.4 ± mm. Body
other yellow sr and feet 6-13, d. to
spineoles slightly bluish yellow bearing
black spots; no bloom; anal plate
black. Spots large, 2 pd and one lat.
per seg. 3d annulets 1-3, 5-6 ant. but in
annulets 1-5. Segs not very distinctly
granulated. 2 narrow yellow in
front. A narrow raised collar-like
ridge on joint 13 ant. (Annulet 4 pale)
Spinech on pale annulet, 4. [Doubtless annulet
misunderstood. Did you want to kill any?]



Sketch looks so

Dr. Love sent mine Sept 10. Hds 2.5
2.3 on Cornus red stained) Young larva
ant. annulets 2 and 4th of 13 high ant.
collared. Hd. 2.5 (stained) a dense
line. Hd. 4 ant. black streak black
mid pale. all rest cream or
greenish other perfect imbrication except
from spinech all dense small spaces
all with 1st covered with thick white bloom
but not woolly. Segs strong granulated
2nd & 3rd divided medially, no pale
area reaches to 5th hole. 1st pale suddenly to
main pattern of 2nd & 3rd

8V

= ? on Cornus alternifolia yaphank

Y.I. Aug. 31 1897. Organism on back
of leaf, curled test can flap up orderly
all together when disturbed.

Hds. 2.3 ± black, smooth yellow, a slight
woolly bloom. Rest yellow sr and narrowly
2 ant, d. to spinech whitish, with 2 grey.
Sr and one large lat. black spot obscured
connected into a square marking, leaving
annulet 2 and 4 pale. Spots 3d on 5, 6, 1 and
3, 4; lat on 6, 1, 2. Segs 6 annulate. Anal pl.
black, 13 collared in front. Feet 6-13 all
pale. 2 slightly collared ant. Spinech annulets 2.

Hd 2 greenish white d. yellow 2 ant & sr
Hd, anal pl. black base of sr black spot
faint, clear and small, or faint distinct with
a good white bloom over all, head too.

Hd 1.5 Hd. anal. black. Same but spots not
the faintest trace and all obscured by
a heavy white bloom.

Hd 1.2 White bloom in black but hd. and
anal plate.

Hd 3 (Ultimate) Hds. 1.5, 2.0, 2.3 very

Harpophorus tarsatus Say

shiny, rounded, recalling snakes.

Hd. jet black. Bod. bright ochre sv, feet and 2 anteriorly. Dorsum in approach bright blue on annelit 2 and 4, on 4 clear down, on 2 out to middle of side. Other annelits including collar of 13 and whole of 14 dorsally deep blue black dotted with fat granules in the 6 coarse forming disconnected black *parallopem* annelits. Separated by pale blue.

Out June 25 1898

Very like *H. tarsatus* (60) but hind knees a little blacker

$8W = 60$

From Jintel (locality? said an "am gun" but none in can and ate *Cornus*) No black. Hd black, shiny 2.8 mm. Anal plate black 2 ant. and sv below spiracle. Other yellow dorsum bluish greenish, under lins dotted with fat granules in the 6 coarse not or hardly bisected in more or less ill defined spots, a large d. row, 2 per seg, hardly bisected in dorsal line and a small lateral spot. Dorsal vessel dark. Patches blotched & varying feet 6-13 thin, moderate, no distinct collars.



Left 18 (ultimate) Like 60.

2 ant, sv ochre. Dorsum blue black, annelit 2 to just above spiracle and all of 4 blue gray.

Out July 1898

8X

Shiny sticky slugs on Quercus tinctoria
 Bellport L. I. Sept. 17 1897. Thinner,
 thick, abd. tapering behind, feet 6-12.
 shiny translucent, tinged with orange
 throughout, darkest on anterior edge
 of 2 orange tips. Hd pale, obviously
 retracted, eye black, w. 9 mm. very
 shiny, sticky, a little rounded; foot
 plainly by transparency, green. Solitary
 on upper side of leaf, puncturing lich
 patina.

Underneath same, not shiny, all orange
 tinted, slightly hairy streaked transversely.
 Ant. end of 2 dark orange. Few dark feet.

8Y

^{underside of leaf}
 of slug on live oak below Crimrod
 Fla., Jan 16 1898. Head high, oval, shiny
 black. 1.1 mm. over $\frac{1}{2}$ wide 2. but shining
 by transparency. Thinner widened at the
 sides, flanged. Body rather black, smaller
 first, all transparent, very shiny sticky.
 The feet all black, abd. small 6-B, pale.
 Body above a little whitish, foot green,
 darker at 2 and 3; sides of thorax and
 S-V region to 2 pale. shaded with orange.
 Backs black. Puncturing regular. 10 mm
Damasoni all whitish caramel, eyes brown,
 not shiny, 6 annulets, long, annulets
 centrally small in incisures, i.e. 304
 large. in black; all yellow tinged,
 most strongly on side of thorax.
Ant Oct 16 1898

Out fall 1898 but spoiled 9/20 9/18
-prattii?

9A Neodipilon dyari

8f? egg in 2-needed pine Rosslyn Va
April 3 1898. Took some and marked tree
Yield in the edge of the needle near the
tip 2 to 4 all on same side, separated
by 3 or 4 times their own length, swollen,
whitish, the edge of egg exposed a slit.
Elliptical, 2x as long as wide and occupying
 $\frac{1}{2}$ the width of the needle. Smooth shiny
yellowish, the leaf discolored to near same
tint for a minute's time around.

Hatched Apr 7 and got in a bunch at end of
needle. Hd rounded, higher than wide, shiny
jet black w. 5 alut. The feet large & spready
black; legs slender, tapering with small
mitochondria fat 6-13; legs. fine annulate,
dull blackish obscureous, pale so as on
feet. No marks. About 6 annules later whitish
green, blackish and faint in no. measures.

Shed Apr 12 Hd 7 shiny water, black, longer
than wide. Legs fine annulate with numerous

Nov 1900

Robins

minute black points, yellowish green,
slightly shaded darker in a annulus d.
Mid + a more distinct lateral one.
The feet black, green in joints, all feet 6-12
13, short not very functional. Whiskers though
irregular. Legs 5 w 6 annulate (?) and at
least 4 mm. of points per seg. (hard to see)

Shed Apr 15 Hd 1.2 & the feet shiny black
Rely whitish yellow, rounded, a distinct
adductor & lateral blackish green shade
2pm 8-13. 3 rows of black spring points per seg.
on 1, 2, 4 of the fine middist 6 annulus.
Many also on anal flap & 8 or folds.

Dorsal vessel line with yellow wave wave

Shed Apr 19 Hd 1.4 with the feet shiny black.
Segs 6 annulus black points darker & numer-
ous on 1, 2, 4. Body greenish yellow, smoky
brown & d. L. Vents not reaching out
as of 2 but covering anal flap, varies in
distribution on different specimens.
Variable, faint or heavy marked. Anal

Some exactly = 7T

Yours were white, always yellowish
Spots scarce quadrat; rather irregular
plate and dorsal marks, 2 dark
shaded large patches. 2d or lateral
stripe most distinct on the sd. breast.
In one a broken s-v stripe along lower
sv folds. In this stripe nearly black and
anterior plate solidly shaded.

Spec Apr 26 Hd 1.8 Hd. shiny black.
Thick fleshy black, abd. 6-12, 13. Body round-
easted black, uniform, says 6 annular
black setae very minute. Body yellowish
a broad distinct black sd stripe, narrow
post. & giving two large contiguous spots
on anal flap. A lat. row of spots
1 per seg (annulus $\frac{2}{3}$ to $\frac{4}{5}$), narrow black
spots at bases of abd feet (lower sv fold)
formerly almost a continuous line.

another sd & lat. band both solid &
black, black dash above the upper & on
lower sv folds. Upper sv fold more yellowish.
Apr 25 (Swingjacket) Hd whitish. eyes
tinted, eye black 1.4. Seg 6 setae 1-2-4 fine

Body shaded pale yellowish all smoky
tinted, sd & lat band smoky black
broken, all a little wavy. No feet pale
anal patches smoky black, addorsal a
narrow, representing upper edge of sd band
spring Apr 26

9B

Last year Emma galls on a slender stem
weby willow giving a cog. of a gulf,
Ruslyne M. April 18 1898. In the
main stem below orig. of a branch
in the middle of years growth, the
gulf elliptical 20 x 7 mm, a
woody swelling of twig 3X diameter
of stem, same color as bark or a
trifle greenish. near whole length of gulf about almost size of
stem elliptical, lined with a little
brownish silk. Empty or with pupae.

Pinus virginiana

Apr 22 1898 9C

Bred Mar 9 1900

Brings in a pine for 9A and finds wiggling in jar
after several days. Finds no sign of eating.

Lyre-like but no anal groove. Has small
faint brown edge around mouth. Mouth
white, eye very small, black. Antennae
distinct & quite long. L. V. about 4 mm.
Body subcylindrical, ventrally flatish
or fold moderately distinct. Two feet
short and conic, functionless; abdominal
margin. Seg. obscured 3-annulate
anal plate \triangleright round & a little pointed
slightly projecting and a little brownish
cavifid, smooth, sloping, a little
ridged before its an 13 trans. There's a
little trilobed, the whole body quite
robust. All of quite white, wavy, no
marks. Length $4\frac{1}{2}$ mm. (wiggled and has
full of leaves. Apparently full fed and empty)
white fat attached to stomach under back & just
as have wiggles. More inside young &
glossy of 2 needled pine, in a flower
coming out before same blossomed.
Eats out a portion making the flower
feel soft to touch. Does no sign till cannot

staminate
aments

Doubtless *Xyela minor* Nutt.

Pteromys mendicus

9D = 3B

Egg and I on melon (shrubby) by water,
Anacostia D.C. May 12 1898. Egg D serviculus
was cut under upper epidermis $1.5 \times .7$ mm
^{2 towards tip}
margin edge of leaf ² ~~solitaria~~. Egg clear wanting
1.4 x .6, soft, somewhat irregular in shape
Leaf slightly depressed egg forming a slight
granulosa below but green and not swollen
Leaf green after hatching, below as before, above
the broken film covering membrane. Yama begins
eating a round hole in leaf, sitting on edge
of hole. Hd. 3 ± pale greenish brown, eye black.
Two feet large, black, abd very small, 6-11.
Seg. fine & annulate smooth, solid green, not
shiny. Small oval plate and distinct blunt
prong black. No marks. Sits S-shape, whorls.
Another May 3 Hd 6 pale greenish, a low stripe
^(shaded)
in median section and not from eye, eye
black. Body solid green, blunt pale green
two feet pale, faintly black marked at base
and fl. on costal rows, but prongs black. Seg. irregular
in distinct 3-annulate. abd feet 6-11

Thurs May 15 Hd 1.15 green a brown band of few
eye and a centre of brown; eye black minute
brown. Body green, creased, scarcely annulated
no annulations, anal prop. dusky, feet pale.
Thurs May 17 Hd 1.4 green a blackish streak
a wider & from eye. Body clear green
from head, smooth; scarcely annulated,
feet 6-11, base down to tail; anal
prop. dusky dusky. Scattered pale
sd. fat, having I regard a stock darker,
its edges slightly refined & the fat.

See open May 18 Hd 1.15; throat and P1
The 1.6 mm kids are 16 mm long and
still eating. Thin yellow cocoon.

By me spring May 20

Out May 25 1898 Pg

9E

On Clethra alnifolia Booth Haven L. I.
but mat. and not seen to feed (cf. Poe-
culistone inferentia) Hd. whitish with
slight bloom; eye narrowly black.
W 1.3 mm. Cylindrical, slender, sitting
or resting on back of leaf. feet 6-13
all near light green, immaculate,
a slight white bloom which forms
a distinct white sd band a each
side. Legs nearly 6-annulate. Spreads
minute, dark.

Spring jacket June 24. All brown pale
green, head whitish, eye black; bd
slimy. Legs finely annulate. No marks

8d 9E 9E Out Apr 26 1899

Poculistone inferentia ♀

First May 22. 1899

Pholcione irregularis nsp
on C. aegyptiacus $GF = N$

Flat in center ~~figurine~~ ~~represented in~~
as looks as more ~~clawed~~ ~~99~~ in
M. of on smooth willow Aug. 1898
Hd black Hd with flat feet w/ 12.
Many white hair from angles
with a 2 broken rows and rows of hair
marked by few rows coarse and
large bristles. Rostrum
a broad piece from front 2-3 and 1/2
orange yellow & few ¹ gray black
red spots 2-12 on the front row of
hair; small plate black large
not perfectly colorless, transparent
but a trace of a small black dot or
fascial line with red color
Hairs all white occurred Hd 1-12
Later red spots very large & small &
absent. Sep. 3 white and rounded
with very few or no hairs. Spots 3-12
& small plate black, white feet & except
at vessel

10 A

Lyda? egg on blue back, Calvert John, Md.
Apr 30 1899. Cylindrical, ends rounded
smooth, slightly shiny, white with shiny
blue green tint, opaque 1.8, width .6 mm
Hatched May 3, cut a slit and rolled a part of
leaf with slight web. Hd round, white eye black,
mouth brown w. 53 mm. Antennae about 2 times
recess long, pointed back, white, transparent
anal style long, similar to antennae, not colored
and 1/2 as distinct, rounded, whitish.
Head May 5 Hd 7 shiny, transparent, hair tinted, eye
black, mouth brown, body green, transparent
a little whitish, shiny, no marks, eye 4 mm.
No feet, antennae and style whitish.
Head May 7 Hd 1.1 pale whitish brown, shiny, transparent
eye black, jaw brown, and projects about 6-joint
of colicid, transparent a little whitish not
drawing the green food. A narrow black line
a 1/3 ant and one before foot of joint 2. no
other marks, and plates and pump all pale.
[died]

10 B

Lyke? eggs on willow cabin John, Md
Apr 30 1899. Like 10 A but several together
a separate bars but all at end of same
shoot. Cylindrical, ends rounded, pale
yellowish white, slightly shiny $1.4 \times .4$ mm
Hatched but would not feed.

10 C

Smooth hole sps just like the *Schizocerum*
peruviana but on *Vitis* at
Cabin John bridge, Md. May 7 1899.

Hd. 6 prominent round, grey, eye black, mouth brown
antennae very short obscure. Body grey top, broad
3-annulate, 13 annules, 4 pores and postantral
feet below; shiny, large blackish marks on base
of anterior feet. Abd pale, abd. very small.

May 4 faint brownish grey in flake. Body clear green
but a little testaceous with distinct black marks at
base. Roof all green, smooth, abd. very small
Md. 9 prominent, rounded, green, faint black eye
black; antennae indistinct, a few testaceous
but smaller than ocellus, colorless. Roof clear
green, transversely, 3-annulate, smooth and a
small ridge or perceptible hairs and pale
green with 2 points, 2 points at side of arms,
and faint postantral, on feet very short 6-11.
A faint testaceous spot at base of the feet but
body all without marks. D. vessel smooth
distinct, transverse line narrow and obscure.

May 7 Hd 1.1 All clear green, eye black, upper
and lower testaceous. Post spiracular glands
present, green. Hd shiny and antennae indistinct,
base, the feet testaceous tinged. abd 6-11, 13 very small
spiracles black rimmed.

May 9 Hd 1.4 Green clear, hd faint testaceous
in the lobes, eye black narrowly, antennae only
a scar. The feet testaceous at tip, and a
black spot base. Legs indistinct 3-annulate
smooth, no marks. all as before. Ant plate
pores and others above arms brown. Shoot pro-
jects below arm green. Stg. glands colorless.
Faint testaceous particularly green, base all green

May 11 Spotted green of brownish yellow with
testaceous.

10 D

78-11

Left edge feeding renovated on *Carpinus*, Calm
John Ind. May 1 eating a hole in nutlets!
Leaf body curve S-shape Hd. Smaller testaceum,
a dark last shade eye black; shiny w. 4 run
body transverse whitish, fine annulus (about 3)
shiny, foot green, and w. swollen, feet 6-11, 13
not used. May 9 Hd. 7 whitish, slightly testaceum,
eye black w. a shade paler! Body colorless
the first green, finely annulus, 13 enlarged
feet 6-11 swollen. Antennae a midventer, points
May 12 Hd. 8 marked greenish shiny, a black
shade on each side and on cleft in w.
vertex eye black midventer bottom dark
body transverse green shiny 6-13 whitish
the feet clear with black smule at the base
6-13 foot shrub 6-11-13 swollen w. a pair
of black, swollen tipped clear anal prongs
shocked from a dorsal vessel not extracted
May 14 Hd 13 pale brownish green, a black shade
behind collar, and a line w. in w. 10-11, 13
no shade observed 6-annulus transverse green
a basal not shiny at all, basal hair fine
foot 6-11 distinct, swollen, 12-13 a little enlarged
the buttons (young) brown at tip. The feet clear
testaceum at base. Antennae midventer, not jointed
died = *Pteromys strigosus* Mord?

733

Four codes on beach and black oak Roslyn
M. Aug. 6, 1898. may be fasciola but to judge
sure follow each.

733 A Elliptical, long, narrowing behind, ridge
well marked with scales and pub 2²
spines. Skin fine shagreen granular
all over, depressed spaces not distinct
shed Aug 9 well 2² spined fasciola
tapering behind. Stage III.
shed Aug 12 (8 jointed)

| | | |
|-------|-----|------|
| Aug 6 | 1.5 | cat |
| " 7 | 1.6 | " |
| " 8 | " | 10th |
| " 9 | 1.7 | cat |
| " 10 | 2.0 | " |
| " 11 | 2.1 | shed |
| " 12 | " | |
| " 13 | 2.3 | cat |
| " 14 | 2.5 | shed |
| " 15 | 3.0 | cat |

733 B Skin all fine shagreen granules, the
 Aug 6 1.7 well
 " 7 2.2 eat 2 spine numerous on lat. ridge,
 " 7 2.2 typed
 " 9 2.2 eat less so on sd ridge. and a very few
 " 10 2.6 "
 " 1 2.7 "
 " 12 2.6 still
 " 13 " "
 " 14 2.7 eat all over, the depressed spaces hollow
 " 15 3.0 "
 " " " very, septa incisives well marked (fasciata)
 " " " shagreen like fasciata III
 (Montel)

| | |
|-------|--|
| 733 C | Shape of <u>fasciola</u> , tail quadrate. Ridge low, tubercles. All finely pointed |
| Aug 6 | 2.2 |
| 10 7 | " |
| " 8 | " |
| " 9 | 2.9 cat |
| " 10 | 2.8 tubercles |
| " 11 | " " |
| " 12 | 2.9 still |
| " 13 | 3.3 cat |
| " 14 | 3.1 " |
| " 15 | 3.7 " |

Wine Park Creek D.S. Sept 10 1900,
not full grown. Lots of young.
On July 14 1901. carne cutata Cope 17476
734 July 14

733D Like T. fasciata IV. The sharper
Aug 6 3.0 white
" 7 3.3 white
" 8 4.0 cat
" 9 4.3 "
" 10 4.2 white
" 11 " "
" 12 4.3 cat
true fasciata The sharper is much too fine
very like that of young

733E
Aug 7 2.6 white
" 8 2.5 "
" 9 2.9 cat
" 10 3.2 "
" 11 3.1 white
" 12 " "
" 13 3.7 cat
" 14 4.3 "
" 15 4.1 "
= fasciata (?) juv.

box mother on black skin]. Some
2^o spines on both ridges.
[also a 4.9 to 5.6 regular stage
T. fasciata on abestant]

Pyromorphids on red-bell (Cernu canadensis)
Rocklyn, Va. Augt. 1901. All (50-60) on one
short but separated, scattered w/ the
backs of successive leaves. Leaf near
tip had a wavy mass of egg covering.
Hd. 6 ± small shiny testaceous; mouth darker
3 with 4 next 4-13 with three. Hair sparse, mostly
pale, mixed with long soft white ones.
Body deep black 5-11 in ② shading into
dark red-brown 3-4 and 12-13. 5-7 region pale
yellowish and all the hairs contrasting
pale yellow. Long pointed glands behind
the spiracles. Interseg. d. and lat. white
globular spots. Thrice, flattened; 2 knot-like
with no cruts on it but hairy. Skin finely
granular. Spines have tubercular
or bullous bases. Feet short & oval. Venter
shed Aug 8 Hd. 8 ± the soft curving white hair
form a halo all around for 3 mm. The
stiff hairs are short. Color the same. The

Sept 4 last held to J.

stiff hair are pointed, smooth, with large bases but not bulbous or cross-harved; the long hair are finely featherly barbed beyond the smooth basal part. Skin fine granular. D. color ends above vent iii, wavy, down with in the measure. D. & lat. white spot above the glandular dots. Head and anal tip yellow. dark brown

shed Aug 14 Pyriformid shape. Hd. 1.5 Body pale yellow s-v. head, and tip and vent with a circular area around each. On 3-5, 12-13 deep brown-red d. to ③ shaded, running close to the vent. On 6-11 deep black, cut by the curved holes runing vent. ① and is raised by semi-circular holes (2 vent ③); not reaching below. Separated spaces (1) and (4) large, white. No vent on first 2. A yellow papilla by each spiracle, 4 vents on the ^{third lower edge} 2/2

3 m abd. sp. including 13. A few hairs on foot base.
Hairs of 2 kinds, short & spiny; long are feathered
but very fine all as before. Feet short, normal.

Shed up 18' + 1.5 = The same. red 3-4 12-13 black
rest 5-11

5' d May 26 Hd 2.0 ± Same. Hair 12 myn with 25
as dorsal esp. spot also present small. Front legs
have large claws for digging. Has webbed feet not 51.

Sept 18
1905

735

Adoneta sp? found 8) jonted at Glen-
dale? L. 9. Sept. 1898. 4 types

midribs of d. purple
and all subequal, 5 midribs each
practically alike, no pubescence and 3
hairs of 6 and 7. Caltrops reduced
on ant. side hair, 6 et seq., only well
developed in 12. and 13. (See paper)
The color of dorsal (and r. a blue
purple from springbok, less red-
dish or maroon.

736

Schizura virginica from Mr. Hartshorn's Sept. 16, 1898
 Hd light brown, velvety with dark
 w/ straight puberulent rather broad
 vertical bands. Hump a 5 short,
 pointed, 1/2 high as a low hump.
 Seta 3-4 green brown dotted, rest red
 brown dotted & mottled. a faint brown
 line line pale below but all the
 region from 11 to 14 uniformly mottled
 brown. D. a light brown olive shade
 5-8 stripes pinkish and several a
 base of the V-mark on 10 as a light
 brown mottling. 12-13 dark d. the
 hind side light. feet concolorous.
 ate wild cherry.

Span Sept 17

737

Butterfly larva running in the
 road, park, Washington D.C.

Sept 27 1898. Spring hd short; scales
^{except 5-8} ^{lower double} array on 2; 5 m 3/4, 6 m 5-12 i.e.
 median. 8d, lat. substy, 2-5-8 in
 line, m 8 one 11, none 12; 2 in line 13
 Body black, yellow dotted; an
 additional diffuse broken yellow band
 Large orange spots around base of ③
 ④ breaking narrow lat. and substy
 pale yellow lines. Spring blue black
 except 2-5-8 on 2 and the lower pair
 3-4. Hd rough, black on face, neck
 orange with a hd behind and 2 in
 front.

Span tuft to T at once.

Cast Oct. 6. *Junonia coenia*

dark line in d. suture of head
Blow for coll. S. latitans

738 = 447

Nocturnal egg on back of willow leaf. Collected
John Wd April 30 1899. Circular, flattened
48± ribs diminishing by in-convolution
tubular, flattened, marked by cross striae. Slightly
shiny, translucent whitish. D. .6 h. .4
Hatched May 3 and eat gnats & midges.
Hatched, bilobed, shiny whitish, jaw brown
ocelli 6, black, distinct; white on body slender
whitish green from food, feet 7-8 whitish.
Setae normal, 10-12 in the margin in line, short,
white, tubercles rather large but concolorous.
Abd 9-10 shiny of equal whitish & feet
about equal, seg 3-anelli 6 setae obscure.
Hatched May 6 Hd .6 bilobed shiny green testaceum
yellowish back, slender, whitish green
abdomen, seg. 1-4 cream as white folds, 14 dist.,
no marked but very faint whitish red. line
test 7-8 annelli and the rest. Macular line
white. Tubercles whitish, setae fine, 18 & below
lower edge of operacle.

Head 20-22 Hd 1.2 intertidal soft yellow, soft green reta
and but fine incusus deep folded, body
uniform. L. d. 1-5 d. various, distinctly black
below white & end 5 d. whitish edges above.
18 at 5 middle 6-10 before lower corner, 11-12 V, 12 below
in 2 sets operacle. Setae dusky. 6 ocelli.
Hatched May 11 Hd 1.8 soft yellowish green a sd pale
line edges below with greenish-brown, 5 annelli
Hatched May 14 Hd 1.6 very densest but clearly
below pinkish & pink 6-10 clear soft green
with single sd line - also very fine bands below

739

Black micro on *Californicus californicus* Wd.
Web of leaves, like them off at base and
makes a partial web lined tube ^{just} with
whitish in this. May 8 Hd. shiny black 1.2
mm. Seg 2 anelli black or white for a
second purplish, c-d. Main black cut
by 3 pale lines. Tubercles small, black
distinct, setae long pale. 18 at very close
st line, but from separate bands tubercles
& a short sole then 18. On 3 it ~~is~~ ^{is} a small
marked, forming a large tubercle.

Hatched May 9 Hd 1.7 dull black - elongated, @
brown black pointed centrally (8th. very large
and strong corners all bright brown with pale
central line. Body dull red-brown, shiny
slightly, dorsal, whitish except at the ends,
and pale diffuse whitish spotted - no web
tubercles small, corners, 18 and v. approximatis
on 5th ridge but not whitish. Setae long, dusky
11-12 of 3 in a large tubercle. Web a wide
cone of dust in a loose web among the spin
woolly leaves.

May 16 open w/ end & cone forming - close web
of dust in the web

(end in June but May broke open
the box and mouth lost)

740

Green mites in a web on willow; single cabin John Md. May 9 Ad 1.5 ± shiny black, hair above mouth & base antenna white. Body ^{ventral} surface whitish green, 8 glands yellow. Cyl black, divided centrally on pale green a front edge, tubercles of 2 also black. Infold 2, 3 black, 4 green, no anal pl. Setae long, rather coarse, white; 10 and 11 whitish; tubercles concolor, glossy, not conspicuous though moderately large. Anal vessel a dark line.

Reptited May 13. (Ichneumon)

(On extension of line not mentioned)

10 E

caught 77 years by Mr. Cockrell, Wash D.C. May 15 '99. Ad 1.6 mm. Pale testaceum not shiny; eye black narrowly. Antennae rather indistinctly. Body straight, seg. 6-anal, small tubercles tubercles on 2d and 4th annulets. Fets 6-11 transverse whitish green, a distinct greenish white of line of edge of a vessel 3-12, last behind a a greenish white shade of 12-13, pulsating. A distinct white strip band 5-anal band, straight, rather broad. Anal plate rounded, pale in the edge, no projectory spines. A slight blackish shading on the thorax or ridge.

atour near Desim Rd.
July 2 1899

10 F

W.H.

Parching slugs on large-leaved Desmodium
Roslyn Va. June 24 1899. On or near leaf
Hd. 1, red, brownish green, shiny, cellular, black spot
slightly retracted; antennae rudimentary. Body
irregularly flattened, so region protruding flattened
feet 6-12, 13, rather slender. Segs with 3
rounded areas like blunt tube on first $\frac{2}{3}$ of
seg. sd. (at, step foot) 5-7. These are duller
whiter, dark edges erect above from the tip of
which a round depression before the sd on
anillet 1 a tubercle with seta; also 10-11
on anillet 2 on 2 tubercles (in one original)
Below the sd a long seta
with 1 seta. The stig rises from upper edge
of a tubercle with 1 seta. 5-7 from a large
tubercle forming projection of S-V ridge in
which are several setae - foot with small
setae. All the tubercles are shaded with
dusky black except in their center.
Segs obscurely 2 annular, the annulus

minutely granular in the center.
Body otherwise green, shiny, smooth.
The glandular tubercles form a row on and
(i.e. m. 3 - anal fl. is smooth)
edge of each anal foot. on anal plate
Hd 8 pale brown eye black. Body 20 mm
has more yellowish, yellow except for
the green foot, the tubercles only very
fairly shaded, nothing unsightly but
the black walled tube in 12 rows which
makes the larva look about spring. The
feet stumpy, though a little enlarged
Hd 16 Same, 2 annular. Head black yellow
foot green, shiny; spine black walled.
June 25 Same on ^{brown somewhat} irregular loose coccus
of yellowish, setaceous cells without
swelling. Setae tubercles diminished.
Out July 6 1899 98

Clut pg 30 1899

10 G =

Saroflies on plant like fire weed. Gaphawk
23. July 10 1899; many on one plant flat on
center or wide side, eating whole leaf.

Hd. 1.3 whitish a black spot on vertex, a
nesting behind each eye and a dusky arc
in top of claspers, mouth brown. Hd. 6-11, 13
brownish, apex slightly pointed, antennae
subdivided. A slight white car. Body
flattened below. Feet all small, abd 6-11, 13

Seps obscurely 1st annulated, 6-annulated.

Workers a little wider, the side plates
2 slightly elevated in front with a notch
in center; anal plate rounded, all 4-6,
7-8, 9-10, 11-12, 13 white, almost as if with a bloom there-
is a slight, the green food shining through in
marks at all. Dorsal sclerites green.

Hd. 1.1 and 7 in last black worker almost
touching; body same. Hd. 6 in center. 8 difference
between 1-3 being whitish, carapace bottom by
black. Body brown, shiny, slightly yellowish
tinting in 1-3 annulated; no marks.

.25 .34 .47 .65 .9 .700
Solenopsis gabriellae Ashm
Det Aug 4 1899 700

Hd. 5 same

10 H DC 16
Aug 1899

Leaf mine in psudolane, Begonia L. J.

July 21 1899. Hd. 65 rounded, a little higher
than wide, black, the region about mouth

yellow. Thorax back short, distinct and
spreading marked with black, visible

distances from lower side of mine. Prof

colicles or faintly yellowish, the food

or alimentary canal green. 2 dark

spots on vertex of thorax (eye black, un-
tinted) and alimentary

segs 3 annulated with
small blackish tubercles on each annulus

1 in 1st, 4 in 2d, 6 in 3d black spiracles, 3

on 3^d and a few on 5^d folds. Abd feet

very small and short, apparent in 6-12

and 13, though these in 11-12 are hard

to distinguish. Anal plate transverse

one side out to start a very
dusky black. Mine abd feet 6-11, none on 12-13

Hd. 35 same but worker and head reddish brown

Hd. 25 same sides Hd. 9 colorless whitish, occiput
black. Body green, no marks. Hd. 10
brown, brown the carapace almost black

and 11-12 green, Hd. 11-12 black
spine white

11A

Lyda on plums, S. M. Dodge, Louisiana Mo, eating green above June 1, 1900.
Hd brown, others, fairly green
tinted; long antennae and eye
black. Body green, not shiny,
+ 4 annulate, subventral fold broadly
ochreous, cm, the feet, subventral
plate, 2 quadrata patches on an-
anal plate and anal stylus
black. D. ventral darker green.
D. venal darker green.

11B

Scolecinae nematus a Alda D.G.
June 7 1900 Ad full slender 6-11,
about a puppy 13. Seg 4 annulate
11-18 shiny solid orange red, eye
black. Body shiny brown green
black dorsally, olivaceous green vent.
+ ventrally but on large tubercles
black. The feet except joints, ad.
extremes of anal fold black. A series
of median ventral black blotches, anal
feet olivaceous. No tubercles d, but
setae on 2¹, 3² annules, rounded large
2² high, 3-5 small; 5-7 a large tubercle
behind spiracle and one on each
sv fold + one above fold before.
One June 23-25 1900

11 C

Gregorianum variegatum or black brick
Stone Man Mt., Va July 31. 1900.

Hds 2.1 high now flat before 3 mil
4 dark below & above, shiny black
Body cylindrical, feet small 6-11, 13
Shut black and wings remote.
Sep wings 4 amber, setae 2-3
Dorsum shiny black & smooth
narrow at neck and fl deep
black. Subcenter transverse yellow
with black marks on 1st & 3rd fold.
venter & each sep black &
front but diminishing in 3 as the
post edge all trans yellow
the feet black except at joints.

Abdomen brownish, spines very
dark. Not May 3 Hd 2.5 do not the
feet all pale and no black on 1-2
glands

12 A

Solitary variegata or straw leaved
Cottonwood Golden Col, May 29 1901
Feet 6-11 mm 13. Hd round, green, fine
brown peppered over entire and 2 S. ocelli
black, anterior a dark spot, obsolete.
Eyes large, 6-7 mm, 2 or large
translucent green, not shiny, around
darken, trochanters brown paired whitish
in winter. No wings, the small H.
a little angled at corners.

Not May 3 Some, not the same shiny

Was cutting corn out through label
was a different jar. May 1902

12 B

Leaf 4 inches on cottonwood, Denver col
June 6, 1901. Two, blotch near a margin
of leaf. (But not rounded pale bottom
of blotch almost like sharp; yellow black,
around brown, and short. Body white. Not
ventrally, near each A. toe, a little larger
pale whitish, testaceous tinted, a flat, pointed
d. or ab. wgs. The feet short pale. Ab. shell 6-12, 13
In mine 16 (fatter, rounded), apex under 2
D. bent, and drooped below. The upper foot small
and abruptly rounded off. And short, indistinct
3-jointed, curved; colulus having scales with
some shading, yellow brown black, you do
blotching but almost uniform, flattened ventrally but
quite thick, through a little thicker, is slightly
concave, convex. Col. indicates 3, a dark
one, bright at first. corners, blackest at edge.
No anal fl. or pump. Smooth shiny. Spotted
white from foot, just above green. The feet
4 jointed with a clear black, small, projects
laterally, a ventral black has a 2' indistinct
conceal; a rounded patch on 3-5. feet which
marked before by dark black transverse are on 6-12
a black circle surrounding the whitened part of

13. Gularum black w. 1.0 mm

12 C

On 35 fingers bipinnate (993 plant) Platte
Canyon col, June 7 1901 (all green in
except gularum and white crown on
the plant; hairs not visible in crown)
Hd. greenish brown streaks, a diffuse
black patch in S and one on side post.
Feet on 6-10 12, ventrally on 11 as very
shortened in J. Green with 3 rows of
small round pale centred black
spots to say. Middle row slightly
out of line ventrally. So again more
yellowish green, all evenly transversely
down to feet. The feet shaded yellow
and fl. an approximation. Lateral
on col.

Over June 15 1901

12D

Edge eaten solitary in willow, Platte
Canyon Col., June 7, 1901. Total 6-11, 12
Hd and green, ocellus black. Body
rather straight with round mouth
large and flap. Not shiny white
green with a white strip. Strip
composed of several a few broad
blown & 6 narrow the others
fair all green.

June 11 Saw 4 J. same blackish as
stripes

12E

beginning a broadened green, shiny
black, Golden Col., June 10, 1901
Hd pale brown with a broad black band
in S. Ocellus moderately ant. and
mouth black ringed. Total 6-13, legs first
broad, the first black at base ^{late} with
a small brown. Second about
a faint gray green and has at a
narrow black bar. The ^{late} white stripe
odd with a faint gray green stripe; ^{late} white
a row of narrow black dashes along base
1/2 feet. Body taper behind. Pedal
darker form a straight line.
This June 17 (ultimate) Hd white con-
trast, no spot eye black contrast brown
body very whitish green & a faintly
separated blackish line and broad but
less. So all over the others
stripes gone.

Spec. picked from like Miller bird
Oreocaria glomerata (Burm.)

12 F

Flat a ventral on smooth white body
col. June 19 1901. Hd round green
green whitish above eye black.
Body 6 annules long, with 20 sp.
Jnt 6-11, 13, blunt and flat rounded
whitish green with a white jd line
and a broken dotted line, one. Tra-
chel line slightly whitish dotted.
Skin smooth w/ a little shiny.
The feet round tipped.

12 G

Spec. similar in "a Tabatae" (Intern. N. S. D. 46)
Burm. col. July 1, 1901. Body green,
hd 1.0. round, flat, apex wide & like
a triangle but 3 sharp oblique angles
and 1 black ocellus. Body whitish, soft,
whitish, Ooc. tapering just. genit. smooth
showing 3 annules the first dented
a concolorous striped ventrally w/ 1.
The few close together, projected test.
annulations. No abd. test or test
slight undulations abd. Found a male
in 6-12 & 13 (?). Hd. whitish above
in brown or darker & a whitish body all
white unmarked.

Refers last. Hd are dark and outlined and
epistome. Body whitish, green from just
2 faint. Whitish post. anal fl. large hole
Sep 3 annules slightly shiny. The feet
black tipped a darkish shade and side 1
ventral plate of c. as a ventral spot
of 3 & 4. Abd. feet undivided.

124

8f on 1064 plant Ad mid white
eye black. Red ground more
pink. Feathers pink feet 6-13. Feathers
26 mm long, d. several mm long green
a white tip stripe.

12 I

Mosquito eggs on rain water, Kauai Bellows
F.M.C. Aug 12 1901. In elliptical mass, more
rounded at one end 4.5×2 mm, the eggs
being neck, the top of the mass, found by
them pointed smaller ends, the sides 2
and a little oblique, fringed by a row of
irregular spherical cells at the lower
surface of the body of chain of egg. Single egg
longish, cylindric, tapering to the wings.
The middle gla and the other large, and
out truncated, another brown, darker at
the pointed end, smooth without distinct
ridges, the mass blackish brown. Edge
cells pointed brown at one end, near a
line of cells at the other, a black point
at the tip surrounded of a ring from which
radiate corrugations. Surface granular
Aug 21 seem to be old eggs. but more white
between edge cells (= covers) egg surrounded
below with a black point and radiating
corrugations tipped by a small white cap
of bacteria. all dried when put in
the 120 water.

Culex purpureus

12 J

Culex larvae in stream above wheel dam and in spring pool. Belpoint 20 Aug 26 1901. Sparingly in stream, more column in pool with Anopheles in both cases. White ringed antennae position similar to perpugus, perhaps a little deeper in water from large tube larvae more sluggish less easily taking to bottom. Hd long, flattened shape as in perpugus but broader, larger in proportion; antenna large the basal part black long white, black at 1/2, terminal joint black, more slender. Eyes black, posterior rounded to a point; hd transverse pale between, smooth bush hairs. In show a black or dark brown black band across water of head. Thorax about wide, at maturity shoulder like a thick ring, greenish or green. Abdomen slender no joints and as long as 7th abd. with 8 slender hair-like processes at a base of long hair. Dorsal shield very thin, slender as long as 1/2 of abd. Dorsal transverse at top and not with tuft of fine hair just abd. where a great center by the dark ab. canal and silvery brachial tubes. Hair tufts in sets arranged in all legs.

On in the Taffy St pool Sept 18 found

Cold fork, Spring 2nd ditch place - Culex all 12 J
Pool in river, cold but not so cold - March 12 J, fewer
warm swimming pool W Belpoint - all 12 K

12 K

(over)

Culex larvae rare in stream above wheel dam with Anopheles and 12 J. Pts near surface and not deep, different to distinct from Anopheles in some points. Like to hide under the Lemna. Sluggish often not moving when actually touched. Hd wider, longer than wide, proportionately more pointed before, the antennae small, divergent, all black black throat elongated but not annulated, flattened to size of hd, dorso-ventrally. Ab. uniform tapering little post; hair of. around with 4 finger. Ab. back pink about, and large about 2 rays from midline at tip are pink & divided black front teeth as long as width of tube, all yellowish translucent, ab. canal dent edge by silver, brachial tube. Hair black the thorax ones equal, long, base of first 2 ab. legs also long & about like thorax but the rest very short & inconspicuous tufts of oval segments long. Hds. 6 mm more in swimming warm pool W Belpoint all Culex 12 K (some Anopheles). Hds brown the little ones black. Hair bristles not very long but not so far as Anopheles often bent up to feed at surface

Manstaemia sapphirinus (S)

new Cognillat varif. Oct 2.

12 L

fly pupa just like mosquito one but very large, Spring Pool, Bellport, Aug 1901. Its slender funnel-shaped thorax air tubes without gills, and form like paddles

12 K Egg in warm pool with 12 K. A D man floating on the water (but about $\frac{1}{4}$ submerged) except microfilaria end down, closely glued but not apparent. Max. about 2 mm. Egg elongate cylindrical blunt ended or long (sheath) end, pointed without central elevation tapering considerably to other end; smooth, its point $\frac{1}{4}$ roughly granular with long fine pointed granules. Dark brown shading to black at apical fourth. Hatched Aug 29
see it, this pool, son, black w. arms 2 mm. Size Sept 3 Hd. 3+ mm. at first pale with black shade above. Head of stupor at 1/2 and says how stark other as others so to be strobilus here. Fiber mat. Hd. Hd around black the next day.

Sept 10 Hd. 4 all brown

12 M

Red worms in blacksmith's water barrel Bellport Aug. Aug 1901. On a tube-shaped case of black mucus loosely spun together very gummy free in water. Move with a slow swimming motion. Hd. a little like star with flattened rounded oblique slopes long. S. high; eye in the angles. Small patches, antennae moderate, simple; labrum distal with two simple hairs; a few simple hairs on head. Body slender elongate, last 2 thin, joint gently enlarged on ventral side of proboscis and a tube thus passing bearing a large tuft of slightly curved spines, ~~up to~~ to ad. M. a group of long thick curving subsegmental respiration tubes; a tuft of smaller spines on the last segment, anal tip covered with a ring of recurved spines color bright coral red, translucent, ab. canal whitish more opaque. with a group of hairs tube with head near free tuft, small in the very case, just covering the long coiled hy cases. A dozen tuft of long branching respiratory filaments on proboscis abdominal long, tapering, with curved. Tufts appear to shake filaments, far apart white weather, do not come to surface.

subconsolidated

124

Case worms in ocean and under lava
leaves in debris 1/2 to 12 M but smaller
and all colorless whitish transparent.
in most any stream or pool collected
41 M. Sept 1901. Head rounded, flattened,
free but somewhat retracted within
branch of brain. Eyes 4, two anterior black
spots. Body slender, filamentous,
undulating. A vented hood or proboscis
bearing 2 tufts of recurved spines. Form
and size shape varies on a base
which is rounded at. convex and
spiny in posterior occipital part.
a double tuft of hair from each
segment distinctly meeting.

Type is a rather large case similar to the larval one. Depth as in 12 M. the case being a smooth, pearly, abdomea slender, tapering slightly in a ventral (gaster) laminae the posterior the last segment being a long tuft of white hair, so that ~~abdomen~~ ~~abdomen~~, pale greenish, the thorax yellowish, eyes dark; wing and lip cases very transparent a tuft of few short coarse plumes on posterior edge.

120

Culex larva in fresh water marsh at Taffy Point, Bellport. Marsh was dry a few weeks before but filled again by recent rain. Full of flocculent red sediment. Fairly unripe, easily descending but not swimming down many contrivances. Dark colored brown more or less infuscated, air tube short, prettier centrally, infuscated body dark, largely from food. Eat the flocculent brown sediment covering it all into pellets of excrement. (It has no aquatic form)

(Continued)

Biogenesis of Culex

Breathing tube long and slender, linear
 Antennae white ringed, head wide ... 12 J
 Antennae not white, head moderate ... 12 I
 Breathing tube short, conical or fusiform
 Anal fringe, setae long, distant, tube ... 12 O
 and anal ring elongated
 Anal fringe very short, obscure, tube ... 12 P
 anal ring not infuscated

12.5 *Culex consobrinus* territans

12.1 *Culicoides furens*

12.0 *Culicoides sonorensis angusticollis* (Wirth)

12. *P. calix* sollicitans

12 P

Culex larvae in water mostly rain water evidently had been washed into by last storm (left 6th). Taste not brackish but not perfectly fresh - a slight trace of salt. Amazansells 2 I left 16 1901. Most all pupae, a few larvae, very lively and staying down a long time, longer than the pupa. water in a low reedy or grassy marsh, evidently not permanent water. Culex sollicitans emerging abundant from pupae and in pure swarms in the grass, not biting however.

(erased)

12 Q

Pitcher plant larvae (Aedes smithii) from Fredericton, New Brunswick, N. J. Oct 16 1901. Hd around Gastrocnem. flattened eyes very small a small black dot, not transverse; mouth bristles long but not long, anterior ones not slender, without perceptible middle tooth but small, pale brown, weakly but distinctly & uniformly colored. Width of body just behind eyes, then narrowing gradually to antennae. Color brownish, darker just mouth. Thorax quadrangular, a little wider than long, square angles, the 3 rays curved cordately and equal. 2nd hairs long, equal, anterior & dorsal are very small. Legs slender, subbrownish, legs equal; last hair long on all legs. 1st long hairs diminishing in number but not in length post. Sd with about 3 or 4 hairs. Last comb of 2 or 3 hairs a single row of short bristles. Anterior shorter than 2nd rays and set in narrow ^{1/2 in. broad} top with 2 rows of hairs in upper aspect, curved very slightly, pointed, with soft tip with 2 large pointed spines, with soft tip with 2 large pointed spines, as clear as glass and continuing through 1st hairs (nearly a ft long 1/2 in. broad). Sd & last ^{2 or 3} rays of last hairs terminated in last seg. the ventral part

12 R

In muddy rain water puddle containing
Anticella, Diatoms & other Protozoa with the
puddle Anophelis in tons with near canal
about Blunders Is., Md. Oct 12 1901.

Shape of aylesworthi fsp. Hd round flat, narrow
before. Egs. large transverse; pale brownish,
dark brown in center. Antennae long (as long
as width of eye & twice as long) slender, uniform
width, black with small at middle, the
last 3 or 4 finger; smooth brach. smooth
above moderate convex, buttons; body
cylindrical thick, sup. of stiff, bulging,
gradually a little smaller post. Hair
abundant in unequal tuft above, the
hair ones about $\frac{1}{2}$ width of seg. less
in front scarcely $\frac{1}{2}$ width of seg. less
visible (furred) post. Face brown, surpassing
about 3x as long as wide, double section
below narrow; side combs of fine teeth
each tooth with flat like base of spines
last seg $\frac{3}{4}$ as long as wide from rings
d. blunt double brach, ventral brach
large and long. Fingers slender
small inconspicuous. (disc. in water
with lens)

13 A

Jarvae on ash D.S. mature and all
over trunks May 13 1902. Thought to be
S. varia but Mr. Marlatt says different.
Hd 1.6 round, narrow at mouth of opercular
slit, shiny white, eye narrow
black, mouth red brown. Body flattened
ventrally, robust, rather highly arched d.,
ends slightly rounded. Segs rather fine
8+ annules, white, opaque d., the d.
green & narrow transverse line, side
transverse, 2 are red, 3 or 4 yellow
others yellow. The first small, abd
6-13, all pale.

First stage same but streaked with
orange and shiny shiny. Hd
orange streaked.

